

=> d que stat l13

L1 29816 SEA FILE=HCAPLUS ABB=ON ?APOLIPOPROTEIN? OR ?APOE?  
 L2 1399 SEA FILE=HCAPLUS ABB=ON L1 AND (?DRUG?(W)?DELIVER? OR  
 ?CARRIER?)  
 L3 197 SEA FILE=HCAPLUS ABB=ON L2 AND (?PHOSPHATIDYLCHOLIN? OR  
 ?PHOSPHOLIPID?)  
 L5 1 SEA FILE=REGISTRY ABB=ON CHOLESTEROL/CN  
 L6 143 SEA FILE=HCAPLUS ABB=ON L3 AND (L5 OR ?CHOLESTEROL?)  
 L7 77 SEA FILE=HCAPLUS ABB=ON L6 AND (?DRUG? OR ?PHARM? OR ?ANTIBIOT  
 IC? OR ?THERAP?)  
 L9 76 SEA FILE=HCAPLUS ABB=ON L7 AND ?ESTER?  
 L10 25 SEA FILE=HCAPLUS ABB=ON L9 AND LDL  
 L11 76 SEA FILE=HCAPLUS ABB=ON L9 OR L10  
 L12 67 SEA FILE=HCAPLUS ABB=ON L11 AND (PRD<20021203 OR PD<20021203)  
 L13 23 SEA FILE=HCAPLUS ABB=ON L12 AND LDL

=> d ibib abs l13 1-23

L13 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:430718 HCAPLUS

DOCUMENT NUMBER: 141:1254

TITLE: Synthetic single domain polypeptides mimicking  
**apolipoprotein E** that enhance low and very low  
 density lipoprotein uptake, reduce serum  
**cholesterol** and reduce risk of cardiovascular  
 disease

INVENTOR(S): Anantharamiah, Gattadahalli M.; Garber, David W.;  
 Datta, Geeta

PATENT ASSIGNEE(S): The UAB Research Foundation, USA

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004043403	A2	20040527	WO 2003-US36268	20031113 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,				
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,				
UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,				
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,				
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,				
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004186057	A1	20040923	US 2003-712447	20031113 <--
PRIORITY APPLN. INFO.:			US 2002-425821P	P 20021113 <--

OTHER SOURCE(S): MARPAT 141:1254

AB The present invention provides novel synthetic **apolipoprotein E**  
 (**ApoE**)-mimicking peptides wherein the receptor binding domain of  
**ApoE** is covalently linked to 18L, the well characterized  
 lipid-associating model class I amphipathic helical peptide. Such peptides  
 enhance low d. lipoprotein (**LDL**) and very low d. lipoprotein  
 (**VLDL**) binding to and degradation by fibroblast or HepG2 cells. Also provided  
 are possible applications of the synthetic peptides in lowering human  
 plasma **LDL cholesterol** levels, thus inhibiting

atherosclerosis or cardiovascular diseases.

L13 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:355085 HCAPLUS

DOCUMENT NUMBER: 140:369944

TITLE: Human tissue-specific housekeeping genes identified by expression profiling

INVENTOR(S): Aburatani, Hiroyuki; Yamamoto, Shogo

PATENT ASSIGNEE(S): NGK Insulators, Ltd., Japan

SOURCE: PCT Int. Appl., 372 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004035785	A1	20040429	WO 2002-JP10753	20021016
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004229233	A1	20041118	US 2003-684422	20031015 <--
PRIORITY APPLN. INFO.:			US 2002-418614P	P 20021016 <--
			WO 2002-JP10753	W 20021016 <--
AB Housekeeping genes commonly expressed in 35 different human tissues, oligonucleotide probes and DNA microarrays containing them, are disclosed.				
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L13 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:532467 HCAPLUS

DOCUMENT NUMBER: 139:100247

TITLE: Improved edible compositions containing protein hydrolyzate and plant sterol for improving serum lipid profile and preventing atherosclerosis

INVENTOR(S): Wester, Ingmar; Kuusisto, Paeivi

PATENT ASSIGNEE(S): Raisio Benecol Oy, Finland

SOURCE: PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003055324	A1	20030710	WO 2002-FI1053	20021220 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,				

UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1455588 A1 20040915 EP 2002-788015 20021220 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

PRIORITY APPLN. INFO.: FI 2001-2553 A 20011221 <--  
 WO 2002-FI1053 W 20021220

AB A **therapeutic** composition comprising a protein hydrolyzate and a plant sterol in the weight ratio of (0.02-150):1, and optionally also an emulsifier, a fat, and(or) mineral salt, can be used in a **pharmaceutical**, nutraceutical, or food product for improving serum lipid profile. Thus, a protein hydrolyzate/emulsifier complex was prepared by dispersing 62 g lysolecithin in water, adding 500 g soy protein hydrolyzate, mixing (10,000 rpm), and freeze-drying and grinding the mixture Using only a small amount of plant sterols (stanol fatty acid **ester**, 0.5% as sterol equivalent) in feed containing the protein hydrolyzate had a strong synergistic triglyceride-lowering effect in **LDL** receptor-deficient female mice. The combination of plant sterols and protein hydrolyzate/emulsifier complex also had enhanced **cholesterol**-lowering effect compared to the plant sterols or protein hydrolyzate/emulsifier complex alone and compared to what was expected for the combination.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:5715 HCAPLUS

DOCUMENT NUMBER: 138:61289

TITLE: Truncated **apolipoprotein** B-containing lipoprotein particles for delivery of components to tissues or cells

INVENTOR(S): Shelness, Gregory

PATENT ASSIGNEE(S): Wake Forest University, USA

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003000184	A2	20030103	WO 2002-US19512	20020620 <--
WO 2003000184	A3	20030717		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,  
 GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,  
 GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003008014 A1 20030109 US 2001-885894 20010620

PRIORITY APPLN. INFO.: US 2001-885894 A 20010620 <--

AB A lipoprotein compound delivery particle comprises: (a) a lipophilic or

amphipathic compound to be delivered (e.g. paclitaxel); (b) at least one polar lipid (this ingredient being optional when the lipophilic or amphipathic compound serves itself as a polar lipid); (c) optionally, at least one neutral lipid; and (d) a truncated **apolipoprotein B** (apoB) protein having a deleted **LDL** receptor-binding region. Conjugates useful for making such particles, **pharmaceutical** formulations containing such particles, and methods of using such particles are also described.

L13 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:676038 HCAPLUS

DOCUMENT NUMBER: 137:210959

TITLE: Plasma **phospholipid** transfer protein (PLTP) deficiency represents an anti-atherogenic state and PLTP inhibitor has anti-atherosclerosis action

INVENTOR(S): Jiang, Xian-Cheng; Tall, Alan R.

PATENT ASSIGNEE(S): The Trustees of Columbia University in the City of New York, USA

SOURCE: PCT Int. Appl., 75 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002068450	A2	20020906	WO 2002-US5694	20020222 <--
WO 2002068450	A3	20030410		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2002142280	A1	20021003	US 2001-792448	20010223 <--
EP 1373555	A2	20040102	EP 2002-713684	20020222 <--
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRIORITY APPLN. INFO.:			US 2001-792448	A 20010223 <--
			WO 2002-US5694	W 20020222 <--

AB This invention provides methods of decreasing **apolipoprotein B**-containing lipoprotein and of treating atherosclerotic diseases and dyslipidemic diseases by reducing plasma **phospholipid** transfer protein activity, and methods of identifying chemical compds. for use in such treatments.

L13 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:616213 HCAPLUS

DOCUMENT NUMBER: 137:174937

TITLE: Liposomal compositions for mobilizing peripheral **cholesterol** in treatment of dislipidemias

INVENTOR(S): Rodriguez, Wendi V.; Williams, Kevin Jon; Hope, Michael J.

PATENT ASSIGNEE(S): Esperion LUV Development, Inc., USA; The University of British Columbia

SOURCE: U.S. Pat. Appl. Publ., 83 pp., Cont.-in-part of U.S.  
6,312,719.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002110587	A1	20020815	US 2001-924222	20010807 <--
US 6773719	B2	20040810		
US 2001038845	A1	20011108	US 1998-60715	19980415 <--
US 2002064553	A1	20020530	US 1998-164101	19980930 <--
US 6139871	A	20001031	US 1998-175553	19981020 <--
US 6312719	B1	20011106	US 1999-322336	19990528 <--
US 2002022053	A1	20020221	US 2001-790232	20010221 <--
US 2002110588	A1	20020815	US 2001-992107	20011105 <--
US 2002071862	A1	20020613	US 2002-61503	20020131 <--
US 2004224011	A1	20041111	US 2004-861979	20040604 <--
PRIORITY APPLN. INFO.:			US 1994-206415	B1 19940304 <--
			US 1995-507170	B1 19950726 <--
			US 1995-5090P	P 19951011 <--
			US 1996-728766	A3 19961011 <--
			US 1998-71974	A1 19980504 <--
			US 1998-175553	A1 19981020 <--
			US 1999-322336	A2 19990528 <--
			US 1996-729449	B3 19961011 <--
			US 1998-60642	A1 19980415 <--
			US 1998-60644	B3 19980415 <--
			US 2001-924222	A1 20010807 <--

AB The present invention provides a liposomal composition for treating dislipidemias in human subjects, a method of using a liposomal composition, devices and modes of operation of the devices and of the compns., and kits related thereto. The invention provides for the reverse transport of **cholesterol** from peripheral tissues to the liver in a warm blood mammal while controlling plasma atherogenic lipoprotein concns., including **LDL** concns. A method described above and mode of operation of the devices includes the step of administering an effective amount of a multiplicity of acceptors comprised of **phospholipids** substantially free of sterol. A method optionally includes the step of periodically assaying atherogenic lipoprotein concns. with an assay during the treatment period to assess atherogenic lipoprotein concns. and obtain an atherogenic lipoprotein profile, and adjusting the administration in response to the profile. The large liposomes are dimensioned larger than fenestrations of an endothelial layer lining hepatic sinusoids in the liver so that the liposomes are too large to readily penetrate the fenestrations of one variant. The **therapeutically** effective amts. are in the range of about 10-1600 mg **phospholipid** per kg body weight per dose. A **pharmaceutical** composition and related kit for mobilizing peripheral **cholesterol** and sphingomyelin that enters the liver of a subject consisting essentially of liposomes of a size and shape larger than fenestrations of an endothelial layer lining hepatic sinusoids in the liver is also provided. The invention also provides for control of **cholesterol** related genes and other compds. The present invention also provides compns. and methods for treating atherosclerosis. In one embodiment, the compns. comprise unilamellar liposomes having an average diameter of 100-150 nm. Methods for treating atherosclerosis employing the compns. of the present invention are also provided. For example, liposomes having a mean diameter of about 125 nm were

found to be the most effective in mobilizing **cholesterol** in vivo. Liquid-crystalline liposomes were more effective in mobilizing **cholesterol** than gel-state liposomes.

REFERENCE COUNT: 189 THERE ARE 189 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:408469 HCAPLUS

DOCUMENT NUMBER: 136:395962

TITLE: Methods employing and compositions containing defined oxidized **phospholipids** for prevention and treatment of atherosclerosis

INVENTOR(S): Harats, Dror; George, Jacob; Halperin, Gideon

PATENT ASSIGNEE(S): Cardimmune Ltd., Israel; Vascular Biogenics Ltd.

SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002041827	A2	20020530	WO 2001-IL1080	20011122 <--
WO 2002041827	A3	20021010		
WO 2002041827	C2	20030530		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2429817	AA	20020530	CA 2001-2429817	20011122 <--
AU 2002018461	A5	20020603	AU 2002-18461	20011122 <--
EP 1341543	A2	20030910	EP 2001-997274	20011122 <--
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2004537498	T2	20041216	JP 2002-544008	20011122 <--
US 2003225035	A1	20031204	US 2003-445347	20030527 <--
US 6838452	B2	20050104		
US 2004106677	A1	20040603	US 2003-718596	20031124 <--
PRIORITY APPLN. INFO.:			US 2000-252574P	P 20001124 <--
			WO 2001-IL1080	W 20011122 <--
			US 2003-445347	A3 20030527

OTHER SOURCE(S): MARPAT 136:395962

AB Novel synthetic forms of etherified oxidized **phospholipids** and methods of utilizing same for preventing and treating atherosclerosis and other related disorders, such as cardiovascular disease, cerebrovascular disease, peripheral vascular disease, stenosis, restenosis, etc., are provided. For example, an effective inhibition of late stage atherogenesis was observed in genetically predisposed (**apoE**-deficient) mice following protracted oral exposure to moderate doses (1 mg/mouse) of synthetic oxidized **LDL** components, hexadecyl-2-(5'-oxopentanyl)-sn-glycerophosphocholine (ALLE) and 1-hexadecanoyl-2-(5'-oxo)pentanoyl-sn-3-glycerophosphocholine (POVPC)

(preparation given), compared to PBS-fed control mice. Induction of oral tolerance had no significant effect on other parameters measured, such as weight gain, total triglyceride or **cholesterol** blood levels. Surprisingly, it was observed that the inhibition of atherogenesis by these oxidized **LDL** analogs was accompanied by a significant reduction in **VLDL cholesterol** and triglycerides.

L13 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:356025 HCAPLUS  
DOCUMENT NUMBER: 138:16513  
TITLE: Cell association of liposomes with high fluid anionic **phospholipid** content is mediated specifically by **LDL** and its receptor, **LDLr**  
AUTHOR(S): Amin, Ketan; Wasan, Kishor M.; Albrecht, Ralph M.; Heath, Timothy D.  
CORPORATE SOURCE: Department of Pharmaceuticals, School of Pharmacy, University of Wisconsin-Madison, Madison, WI, 53705-2222, USA  
SOURCE: Journal of Pharmaceutical Sciences (2002), 91(5), 1233-1244  
CODEN: JPMSAE; ISSN: 0022-3549  
PUBLISHER: Wiley-Liss, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB We have sought to confirm indications in our recent studies suggesting that association of liposomes composed of 75-100 mol % egg phosphatidylglycerol (ePG), a fluid anionic **phospholipid**, with cells is mediated by low d. lipoprotein (**LDL**) and the classical **LDL** receptor (**LDLr**). In the present study, binding of liposomes composed of 75-100 mol % ePG to CV1-P cells, either in serum-supplemented medium or in defined medium supplemented with **LDL**, is blocked by the presence of either of two monoclonal antibodies. The first is Ig (Ig)G C7, an antibody specific for **LDLr**. The second is IgG 5E11, an antibody specific for domain 3441-3569 of **apolipoprotein** B100. **CHOLD1A7**, a cell line known to lack the **LDLr** and previously shown by us to associate minimally with 75-100 mol % ePG liposomes, was transfected with the human **LDLr**. The transfected cells bound 75-100 mol % ePG liposomes at high levels, and this binding was blocked by IgG C7. Previously, we have shown that serum, but not **LDL** or high d. lipoprotein, induces association of 25-50 mol % ePG liposomes with both CV1-P and CHO wild type cells, but not **CHOLD1A7**. In the present study, IgG C7 does not block this interaction, and transfected **CHOLD1A7** cells do not show this interaction. Hence, this form of liposome binding appears not to involve **LDL** or **LDLr**, but requires a receptor, currently unknown, and a serum component other than **LDL** or high d. lipoprotein. The unknown receptor, in addition to **LDLr**, is missing from **CHOLD1A7**.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:489727 HCAPLUS  
DOCUMENT NUMBER: 135:51023  
TITLE: Extraction of biological components from body fluids  
INVENTOR(S): Boos, Karl-siegfried; Seidel, Dietrich  
PATENT ASSIGNEE(S): Sebo G.m.b.H., Germany  
SOURCE: PCT Int. Appl., 18 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001048476	A2	20010705	WO 2000-EP13294	20001227 <--
WO 2001048476	A3	20020214		
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
DE 19963420	A1	20010712	DE 1999-19963420	19991228 <--
EP 1242825	A2	20020925	EP 2000-992093	20001227 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 2003080056	A1	20030501	US 2002-168533	20021022 <--
PRIORITY APPLN. INFO.:				
			DE 1999-19963420	A 19991228 <--
			WO 2000-EP13294	W 20001227 <--

AB The invention relates to a method for extraction of biol. components from body fluids, in particular from blood, plasma or serum. The biol. components are extracted in native and biol. active form and can, for example, be used for **therapeutic** purposes, as well as for the production of control samples or stds. for diagnostic tests. Plasma lipoproteins, HDL, LDL, VLDL, antibodies, hormones etc. are removed during apheresis, H.E.L.P. therapy (heparin-induced extracorporeal LDL elimination).

L13 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:824085 HCAPLUS

DOCUMENT NUMBER: 134:9357

TITLE: Method of treating angina and/or anginal equivalents using **phospholipid** liposomes

INVENTOR(S): Goldberg, Dennis I.; Williams, Kevin Jon

PATENT ASSIGNEE(S): Talaria Therapeutics, Inc., USA

SOURCE: PCT Int. Appl., 142 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000069412	A1	20001123	WO 2000-US12962	20000512 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2373681	AA	20001123	CA 2000-2373681	20000512 <--
EP 1183011	A1	20020306	EP 2000-932314	20000512 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2003508349	T2	20030304	JP 2000-617871	20000512 <--
AU 773385	B2	20040527	AU 2000-50053	20000512 <--
PRIORITY APPLN. INFO.:				
			US 1999-134140P	P 19990514 <--
			WO 2000-US12962	W 20000512 <--

AB The present invention provides a method of treating angina, e.g., stable



angina, unstable angina and variant angina, and/or an anginal equivalent comprising administering a **therapeutically** effective amount of a multiplicity of liposomes, and preferably, large liposomes comprised of **phospholipids** substantially free of sterol to a subject for a treatment period. The method also includes administering an effective amount of an antianginal **drug** other than the liposomes. The invention also provides a method of treating claudication comprising administering a **therapeutically** effective amount of liposomes. In yet another variant, the invention provides a method of perioperative and/or pre-operative conditioning of a subject comprising administering liposomes. Several other inventions are also described herein. An antianginal **drug** is selected from the group consisting a nitrate, a beta blocker, a calcium channel antagonist, a coronary vasodilator, a lipid lowering **drug**, an afterload reducing agent, an inotropic agent, a pre-load reducing agent, and an opiate.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:795994 HCAPLUS

DOCUMENT NUMBER: 132:31744

TITLE: Gene probes used for genetic profiling in healthcare screening and planning

INVENTOR(S): Roberts, Gareth Wyn

PATENT ASSIGNEE(S): Genostic Pharma Ltd., UK

SOURCE: PCT Int. Appl., 745 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9964627	A2	19991216	WO 1999-GB1780	19990604 <--
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
PRIORITY APPLN. INFO.:			GB 1998-12099	A 19980606 <--
			GB 1998-13291	A 19980620 <--
			GB 1998-13611	A 19980624 <--
			GB 1998-13835	A 19980627 <--
			GB 1998-14110	A 19980701 <--
			GB 1998-14580	A 19980707 <--
			GB 1998-15438	A 19980716 <--
			GB 1998-15574	A 19980718 <--
			GB 1998-15576	A 19980718 <--
			GB 1998-16085	A 19980724 <--
			GB 1998-16086	A 19980724 <--
			GB 1998-16921	A 19980805 <--
			GB 1998-17097	A 19980807 <--
			GB 1998-17200	A 19980808 <--
			GB 1998-17632	A 19980814 <--
			GB 1998-17943	A 19980819 <--

AB There is considerable evidence that significant factor underlying the individual variability in response to disease, **therapy** and prognosis lies in a person's genetic make-up. There have been numerous examples relating that polymorphisms within a given gene can alter the functionality of the protein encoded by that gene thus leading to a variable physiol. response. In order to bring about the integration of genomics into medical practice and enable design and building of a technol. platform which will enable the everyday practice of mol. medicine a way must be invented for the DNA sequence data to be aligned with the identification of genes central to the induction, development, progression and outcome of disease or physiol. states of interest. According to the invention, the number of genes and their configurations (mutations and polymorphisms) needed to be identified in order to provide critical clin. information concerning individual prognosis is considerably less than the 100,000 thought to comprise the human genome. The identification of the identity of the core group of genes enables the invention of a design for genetic profiling technologies which comprises of the identification of the core group of genes and their sequence variants required to provide a broad base of clin. prognostic information - "genostics". The "Genostic" profiling of patients and persons will radically enhance the ability of clinicians, healthcare professionals and other parties to plan and manage healthcare provision and the targeting of appropriate healthcare resources to those deemed most in need. The use of this invention could also lead to a host of new applications for such profiling technologies, such as identification of persons with particular work or environment related risk, selection of applicants for employment, training or specific opportunities or for the enhancing of the planning and organization of health services, education services and social services.

L13 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:795993 HCAPLUS  
 DOCUMENT NUMBER: 132:31743  
 TITLE: Gene probes used for genetic profiling in healthcare screening and planning  
 INVENTOR(S): Roberts, Gareth Wyn  
 PATENT ASSIGNEE(S): Genostic Pharma Limited, UK  
 SOURCE: PCT Int. Appl., 149 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9964626	A2	19991216	WO 1999-GB1779	19990604 <--
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2330929	AA	19991216	CA 1999-2330929	19990604 <--
AU 9941586	A1	19991230	AU 1999-41586	19990604 <--
AU 766544	B2	20031016		
AU 9941587	A1	19991230	AU 1999-41587	19990604 <--
GB 2339200	A1	20000119	GB 1999-12914	19990604 <--

GB 2339200 B2 20010912  
 EP 1084273 A1 20010321 EP 1999-925207 19990604 <--  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, FI  
 JP 2003528564 T2 20030930 JP 2000-553616 19990604 <--  
 US 2003198970 A1 20031023 US 2002-206568 20020729 <--  
 PRIORITY APPLN. INFO.: GB 1998-12098 A 19980606 <--  
 GB 1998-28289 A 19981223 <--  
 GB 1998-16086 A 19980724 <--  
 GB 1998-16921 A 19980805 <--  
 GB 1998-17097 A 19980807 <--  
 GB 1998-17200 A 19980808 <--  
 GB 1998-17632 A 19980814 <--  
 GB 1998-17943 A 19980819 <--  
 US 1999-325123 B1 19990603 <--  
 WO 1999-GB1779 W 19990604 <--

AB There is considerable evidence that significant factor underlying the individual variability in response to disease, **therapy** and prognosis lies in a person's genetic make-up. There have been numerous examples relating that polymorphisms within a given gene can alter the functionality of the protein encoded by that gene thus leading to a variable physiol. response. In order to bring about the integration of genomics into medical practice and enable design and building of a technol. platform which will enable the everyday practice of mol. medicine a way must be invented for the DNA sequence data to be aligned with the identification of genes central to the induction, development, progression and outcome of disease or physiol. states of interest. According to the invention, the number of genes and their configurations (mutations and polymorphisms) needed to be identified in order to provide critical clin. information concerning individual prognosis is considerably less than the 100,000 thought to comprise the human genome. The identification of the identity of the core group of genes enables the invention of a design for genetic profiling technologies.

L13 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:272901 HCAPLUS

DOCUMENT NUMBER: 131:97247

TITLE: Niacin accelerates intracellular apoB degradation by inhibiting triacylglycerol synthesis in human hepatoblastoma (HepG2) cells

AUTHOR(S): Jin, Fu-You; Kamanna, Vaijinath S.; Kashyap, Moti L.

CORPORATE SOURCE: Cholesterol Center, Medical Service Department of Veterans Affairs Medical Center, Long Beach, CA, 90822, USA

SOURCE: Arteriosclerosis, Thrombosis, and Vascular Biology (1999), 19(4), 1051-1059

CODEN: ATVBFA; ISSN: 1079-5642

PUBLISHER: Lippincott Williams & Wilkins

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The mechanism by which the potent **drug** niacin decreases apoB-containing atherogenic lipoproteins and prevents coronary disease is unclear. Utilizing human hepatoblastoma (HepG2) cells as an in vitro model, we have examined the effect of niacin on intracellular degradation of apoB and the regulatory mechanisms involved in apoB processing. Niacin significantly increased apoB degradation in a dose- and time-dependent manner. Treatment of HepG2 cells with calpain inhibitor I [N-acetyl-leucyl-leucyl-norleucinal (ALLN), an inhibitor of certain protease-mediated apoB degradation], did not alter niacin-induced apoB degradation. Niacin decreased inhibition of oleate-mediated apoB degradation. Niacin dose-dependently

inhibited the synthesis of both fatty acids and triacylglycerol (TG) by 20% to 40% as determined by the incorporation of  $^{14}\text{C}$ -acetate and  $^3\text{H}$ -glycerol into fatty acids and TG, resp. Incubation of HepG2 cells with niacin significantly inhibited (by 12% to 15%) fatty acid **esterification** to produce TG as assessed by the incorporation of  $^3\text{H}$ -oleic acid into TG.  $^{14}\text{C}$ -acetate incorporation into **cholesterol** and **phospholipids** was unchanged. The activity of microsomal triglyceride transfer protein (MTP), a **carrier** protein for lipids, was not altered by pretreatment of cells with niacin. ApoB mRNA expression and  $^{125}\text{I}$ -LDL protein uptake were also unchanged. These data indicate that niacin accelerates hepatic intracellular post-translational degradation of apoB by selectively reducing triglyceride synthesis (through inhibiting both fatty acid synthesis and fatty acid **esterification** to produce TG) without affecting ALLN-inhibitable protease- or MTP-mediated intracellular apoB processing, resulting in decreased apoB secretion and hence lower circulating levels of the atherogenic lipoproteins.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:184154 HCAPLUS

DOCUMENT NUMBER: 130:218310

TITLE: Scavenger receptor BI (SR-BI) antagonists and use thereof as contraceptives and in the treatment of steroidal overproduction

INVENTOR(S): Krieger, Monty

PATENT ASSIGNEE(S): Massachusetts Institute of Technology, USA

SOURCE: PCT Int. Appl., 86 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9911288	A1	19990311	WO 1998-US18463	19980904 <--
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2302403	AA	19990311	CA 1998-2302403	19980904 <--
EP 1007091	A1	20000614	EP 1998-943545	19980904 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2002099040	A1	20020725	US 1998-148012	19980904 <--
US 2004077526	A1	20040422	US 2003-706073	20031112 <--
PRIORITY APPLN. INFO.:			US 1997-57943P	P 19970905 <--
			US 1998-148012	A1 19980904 <--
			WO 1998-US18463	W 19980904 <--

AB SR-BI is present on the membranes of hepatocytes and steroidogenic tissues, including the adrenal gland, testes, and ovaries, where it mediates the uptake and transport of **cholesteryl ester** from high d. lipoproteins. It has been demonstrated that transgenic animals which do not produce SR-BI are perfectly healthy, with the exception that the females are infertile. This provides evidence that inhibition of uptake, binding or transport of **cholesteryl ester** to SR-BI can be used to inhibit pregnancy. The same pathway can also be used to decrease production of steroids, and therefore be used as a **therapy** for disorders involving steroidal overprod.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:44998 HCAPLUS

DOCUMENT NUMBER: 130:115009

TITLE: Method of suppressing a rise in **LDL** concentrations after administration of an agent having small acceptors

INVENTOR(S): Williams, Kevin Jon

PATENT ASSIGNEE(S): Talaria Therapeutics, Inc., USA

SOURCE: U.S., 43 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5858400	A	19990112	US 1996-731257	19961011 <--
PRIORITY APPLN. INFO.:			US 1996-731257	19961011 <--

AB The present invention provides compns. for, a method of suppressing the rise in plasma concns. of atherogenic lipoproteins after administration of an agent having small acceptors of **cholesterol**, other lipids or compds. The method includes the step of co-administering an effective amount of a multiplicity of an agent having large liposomes that include **phospholipids** substantially free of sterol with the administration of the agent having the small acceptors. The atherogenic lipoproteins include **LDL**, **VLDL**, **IDL**,  $\beta$ -**VLDL**, **Lp(a)**, a lipoprotein containing **apolipoprotein-B**, oxidized lipoproteins, and modified lipoproteins. The agent having small acceptors consists essentially of small acceptors and in which the agent having large liposomes consists essentially of large liposomes.. In a variant, co-administration of the agent having large liposomes is simultaneous with the administration of the agent having small acceptors. Optionally, co-administration of the agent having large liposomes is separated in time from the administration of the agent having small acceptors by an effective time period. An improved **pharmaceutical** composition for reducing the size of arterial lesions that enters the liver of a subject is also provided; the improvement comprises an anti-oxidant and derivs. thereof. The invention also provides an improved mode of operation of liposomes utilizing the improvements described herein.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:214294 HCAPLUS

DOCUMENT NUMBER: 128:286343

TITLE: Method of regulating **cholesterol**-related genes, enzymes and other compounds, and **pharmaceutical** compositions

INVENTOR(S): Williams, Kevin Jon

PATENT ASSIGNEE(S): USA

SOURCE: U.S., 43 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5736157	A	19980407	US 1996-728697	19961011 <--
US 5948435	A	19990907	US 1997-850921	19970502 <--
PRIORITY APPLN. INFO.:			US 1996-728697	A3 19961011 <--

AB A method of regulating **cholesterol**-related genes, enzymes and other compds., **pharmaceutical** compns. and a kit related thereto are provided. Exemplary genes that are regulated include a gene for an **LDL** receptor, a gene for HMG-CoA reductase, a gene for **cholesterol** 7-alpha-hydroxylase, and a gene regulating a function involved in **cholesterol** homeostasis. The method comprises the step of parenterally administering a **therapeutically** effective amount of a lipid acceptor. The lipid acceptor in one variant includes a multiplicity of large liposomes comprised of **phospholipids** substantially free of sterol during a treatment period. The method includes the steps of periodically assaying plasma **LDL** concns. with an assay during a period of time to assess said plasma **LDL** and to obtain an **LDL** profile, and adjusting the parenteral administration in response to the **LDL** profile. The method further includes the step of enhancing tissue penetration of a **cholesterol** acceptor and enhancing extraction of tissue **cholesterol** and other exchangeable material with co-administration of an effective amount of a compound selected from the group consisting of a small acceptor of **cholesterol**, an amphipathic compound, and a **drug** that increases endogenous small acceptors of **cholesterol**.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:210766 HCAPLUS

DOCUMENT NUMBER: 128:275115

TITLE: Nonnaturally occurring receptor-competent **LDL** particle

INVENTOR(S): Halbert, Gavin William; Owens, Moira Doreen; Baillie, George

PATENT ASSIGNEE(S): University of Strathclyde, UK

SOURCE: PCT Int. Appl., 74 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9813385	A2	19980402	WO 1997-GB2610	19970925 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2267650	AA	19980402	CA 1997-2267650	19970925 <--
AU 9744667	A1	19980417	AU 1997-44667	19970925 <--
EP 956303	A2	19991117	EP 1997-943050	19970925 <--
R: CH, DE, FR, GB, IT, LI, SE				

JP 2001501206	T2	20010130	JP 1998-515401	19970925 <--
US 2002147304	A1	20021010	US 1999-269533	19990601 <--
US 6670452	B2	20031230		
US 2004235730	A1	20041125	US 2003-657404	20030908 <--
PRIORITY APPLN. INFO.:			GB 1996-20153	A 19960927 <--
			WO 1997-GB2610	W 19970925 <--
			US 1999-269533	A2 19990601 <--

AB A nonnaturally occurring receptor competent **LDL** particle is provided which comprises  $\geq 1$  peptide component having at least a binding site for an Apo B protein receptor and  $\geq 1$  lipophilic substituent. The particle of the invention has **LDL** receptor competency, but does require the use of substantially whole apo B, which is difficult to graft onto microemulsion particles. The particle of the invention may be used as a **drug**-targeting vector in the treatment of cancer cells having apo B receptors. The particles may also be used in a cell culture medium as a supplement for cell growth.

L13 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:767624 HCAPLUS

DOCUMENT NUMBER: 128:43960

TITLE: A randomized cross-over study comparing **pharmacodynamic** and metabolic variables of a new combiphasic and a well-established triphasic oral contraceptive

AUTHOR(S): Van Den Ende, A.; Geurts, T. B. P.; Kloosterboer, H. J.

CORPORATE SOURCE: Laboratory of Special Hematology and Hemostasis, Academic Medical Centre, Amsterdam, Neth.

SOURCE: European Journal of Contraception & Reproductive Health Care (1997), 2(3), 173-180  
CODEN: ECRCFK; ISSN: 1362-5187

PUBLISHER: Parthenon Publishing Group Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In an open-label, randomized, cross-over study in 20 subjects, the short-term effects were investigated of Gracial (DSG/EE 7 + 25/40  $\mu\text{g/day}$  + 15 + 125/30  $\mu\text{g/day}$ ) and Trigynon (LNG/EE 6 + 50/30  $\mu\text{g/day}$  + 5 + 75/40  $\mu\text{g/day}$  + 10 + 125/30  $\mu\text{g/day}$ ) on plasma concns. of  $17\beta$ -estradiol and **progesterone** as well as on **carrier** proteins (SHBG, CBG, ceruloplasmin), AT-III, carbohydrate metabolism (insulin, glucose, glycosylated proteins) and lipid metabolism (total **cholesterol**, triglycerides, **phospholipids**, HDL-C, **LDL**-C, HDL2-C, HDL3-C, HDL2-C/HDL3-C ratio, Apo A1, Apo B, Apo A1/Apo B ratio). Both preps. adequately and similarly inhibited ovulation in all subjects. Serum levels of **carrier** proteins were significantly higher with DSG/EE than with LNG/EE, whereas no between-group differences were observed with respect to fasting glucose and insulin, glycosylated proteins (mainly glycosylated albumin) and AT-III activity. DSG/EE showed significantly higher plasma levels than LNG/EE of estrogen-dependent lipid parameters such as triglycerides, HDL-C, HDL2-C, Apo A1, HDL2-C/HDL3-C ratio and Apo A1/Apo B ratio, whereas the levels of **LDL**-C and Apo B were significantly lower. Both oral contraceptive preps. were equally effective in suppression of follicular development, but combiphasic DSG/EE induced higher plasma levels of **carrier** proteins and higher plasma levels of potentially anti-atherogenic lipid parameters than did triphasic LNG/EE.

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:354033 HCAPLUS  
 DOCUMENT NUMBER: 126:334373  
 TITLE: Antiatherogenic liposomal compositions and methods of using them  
 INVENTOR(S): Williams, Kevin Jon  
 PATENT ASSIGNEE(S): Williams, Kevin Jon, USA  
 SOURCE: PCT Int. Appl., 141 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9713501	A1	19970417	WO 1996-US16388	19961011 <--
W: AU, CA, CN, JP, MX, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2231547	AA	19970417	CA 1996-2231547	19961011 <--
AU 9675956	A1	19970430	AU 1996-75956	19961011 <--
AU 759964	B2	20030501		
EP 863748	A1	19980916	EP 1996-938625	19961011 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1228018	A	19990908	CN 1996-198729	19961011 <--
CN 1119145	B	20030827		
US 6080422	A	20000627	US 1996-731256	19961011 <--
JP 2002515856	T2	20020528	JP 1997-515263	19961011 <--
US 2001009670	A1	20010726	US 1998-60611	19980415 <--
US 2002041894	A1	20020411	US 1998-71980	19980504 <--
US 2002064553	A1	20020530	US 1998-164101	19980930 <--
US 2002022053	A1	20020221	US 2001-790232	20010221 <--
US 2002071862	A1	20020613	US 2002-61503	20020131 <--
PRIORITY APPLN. INFO.:				
			US 1995-5090P	P 19951011 <--
			US 1996-728766	A3 19961011 <--
			US 1996-729449	B3 19961011 <--
			WO 1996-US16388	W 19961011 <--
			US 1998-60642	A1 19980415 <--
			US 1998-60644	B3 19980415 <--

AB The present invention provides a liposomal composition, method of using a liposomal composition, and devices and modes of operation of the devices and of the compns., and kits related thereto. The invention provides for the reverse transport of **cholesterol** from peripheral tissues to the liver in a warm blooded mammal while controlling plasma atherogenic lipoprotein concns., including **LDL** concns. The method and mode of operation of the devices includes the step of administering an effective amount of a multiplicity of acceptors comprised of **phospholipids** substantially free of sterol. The method optionally includes the step of periodically assaying atherogenic lipoprotein concns. with an assay during the treatment period to assess atherogenic lipoprotein concns. and obtain an atherogenic lipoprotein profile, and adjusting the administration in response to said profile. The large liposomes are dimensioned larger than fenestrations of an endothelial layer lining hepatic sinusoids in the liver so that the liposomes are too large to readily penetrate the fenestrations of one variant. The **therapeutically** effective amts. are in the range of about 10 mg to about 1600 mg **phospholipid** per kg body weight per dose. A **pharmaceutical** composition and related kit for mobilizing peripheral **cholesterol** and sphingomyelin that enters the liver of a subject consisting essentially of liposomes of a size and shape larger than



fenestrations of an endothelial layer lining hepatic sinusoids in the liver is also provided. The invention also provides for control of **cholesterol** related genes and other compds.

L13 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1997:15511 HCAPLUS  
 DOCUMENT NUMBER: 126:65456  
 TITLE: Microemulsions used as vehicles for carrying  
**chemotherapeutic** agents to neoplastic cells  
 INVENTOR(S): Maranhao, Raul C.  
 PATENT ASSIGNEE(S): Zerbini, Fundacao E. J., Brazil  
 SOURCE: U.S., 3 pp., Cont. of U.S. Ser. No. 42,105, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5578583	A	19961126	US 1995-388148	19950213 <--
BR 9201168	A	19940412	BR 1992-1168	19920402 <--
US 5874059	A	19990223	US 1996-688611	19960730 <--
PRIORITY APPLN. INFO.:			US 1993-42105	B1 19930401 <--
			BR 1992-1168	A 19920402 <--
			US 1995-388147	B2 19950213 <--
			US 1995-388148	A 19950213 <--

AB Microemulsions, similar in chemical composition to the lipid portion of low d. lipoprotein (LDL), but (not containing the protein portion) can be used as vehicles for the delivery of **chemotherapeutic** or diagnostic agents to neoplastic cells, while avoiding normal cells. When these artificial microemulsion particles are injected in the bloodstream or incubated with plasma, they incorporate plasma **apolipoproteins** onto their surface. The microemulsions can then be incorporated into cells via receptors for LDL and deliver mols. which are incorporated in the core or at the surface of the microemulsion. For example, the microemulsion was made from a mixture of **phosphatidylcholine** 40, **cholesterol** oleate 20, triolein 1, and **unesterified cholesterol** 0.5 mg. Saline buffer was added to this mixture, which was sonicated and purified by ultracentrifugation. Carmustine was incorporated up to 15 % of the total weight

L13 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:731431 HCAPLUS  
 DOCUMENT NUMBER: 124:15336  
 TITLE: Interaction of synthetic discoidal HDL containing an amphipathic peptide and **phosphatidylcholine** with human macrophages  
 AUTHOR(S): Vuaridel, Evelyne S.; Simon, S. R.  
 CORPORATE SOURCE: Dep. Biochem., State Univ. New York, Stony Brook, NY, USA  
 SOURCE: European Journal of Pharmaceutics and Biopharmaceutics (1995), 41(2), 94-100  
 CODEN: EJPBEL; ISSN: 0939-6411  
 PUBLISHER: Wissenschaftliche Verlagsgesellschaft  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB An 18 residue peptide (18A) analog of **apolipoprotein-AI** described by Anantharamaiah with egg lecithin was reconstituted to prepare a

model of nascent discoidal HDL. Particles were prepared by a Na cholate dialysis protocol as described by Matz and Jonas and labeled with I125 or the fluorescent probe 1,1'-dioctadecyl-3,3,3',3'-tetramethylindocarbocyanine. The interaction of these 18A-complexes with human monocyte-derived macrophages was investigated in vitro. Total binding (4°) and uptake (36°) were time- and ligand concentration-dependent. Association of reconstituted complexes with macrophages reached a steady state at 2 h with  $K_d = 4.5-5.6 \times 10^{-6}$  M at 4° and  $K_d = 2.4-8.3 \times 10^{-6}$  M at 37° as determined either by fluorescence or I125 labeling. Specific association at 37° reached saturation at a concentration of 30 ng 18A/5 + 105 cells and  $K_d = 1.9 \times 10^{-6}$  M as determined by fluorescence labeling. **Apolipoprotein** -AI-liposomes effectively competed with the 18A complexes. A 20-fold excess of HDL, **LDL**, and to some extent **Ac-LDL** reduced the association at subsaturating concns. of 18A-complexes with macrophages (37°), according to their **apolipoprotein**-AI content. The values for complex- and liposome-mediated **cholesterol** (I) efflux from macrophages suggest an increased I transport when 18 or **apolipoprotein**-AI were associated with **phospholipids** as **carrier** particles. Confocal light microscopy revealed the accumulation of 18A-complexes in subsurface regions of macrophages, leaving internal regions less occupied.

L13 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:546419 HCAPLUS

DOCUMENT NUMBER: 119:146419

TITLE: **Drug** targeting: application of endogenous **carriers** for site-specific delivery of **drugs**

AUTHOR(S): van Berkel, T. J. C.

CORPORATE SOURCE: Sylvius Lab., Univ. Leiden, Leiden, Neth.

SOURCE: Journal of Controlled Release (1993),  
24(1-3), 145-55

CODEN: JCREEC; ISSN: 0168-3659

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 34 refs.; lipoproteins are endogenous particulate **carriers** responsible for the transport of **cholesterol** and other lipids in the blood circulation. Structurally, they consist of an apolar core, composed of triglycerides and/or **cholesteryl esters**, surrounded by a monolayer of **phospholipids** in which **cholesterol** and **apolipoproteins** are embedded. Being endogenous **carriers**, lipoproteins are not immunogenic and escape recognition by the reticuloendothelial system. Four main lipoprotein classes with characteristic sizes, densities, lipids and apoproteins can be distinguished: chylomicrons, very low d. lipoprotein (VLDL), low d. lipoprotein (LDL) and high d. lipoprotein (HDL). Lipoproteins are cleared from the circulation by specific lipoprotein receptors, which recognize the **apolipoproteins**. Chylomicron remnants and a particular type of VLDL,  $\beta$ -VLDL, are rapidly taken up by remnant receptors present on parenchymal liver cells. **LDL** is cleared mainly via specific **LDL** receptors in the liver. In addition, some types of tumor cells show a very high rate of **LDL** uptake. Lipoproteins can also be directed to non-lipoprotein receptors by chemical modification of the **apolipoproteins**. Acetylation of **LDL** induces rapid uptake by scavenger receptors on endothelial liver cells. Lactosylation of **LDL** and HDL induced rapid, galactose-specific uptake by Kupffer and parenchymal liver cells, resp. The oily core of lipoproteins provides an ideal domain for lipophilic

**drugs.** Some lipophilic compds. incorporate spontaneously into lipoproteins. More hydrophilic **drugs**, however, have to be provided with lipophilic anchors to enable incorporation (**prodrugs**). These (pro)-**drugs** can be incorporated into lipoproteins by aqueous addition, contact methods or reconstitution methods. Because (modified) lipoproteins can be taken up by specific receptors on tumor cells or liver cells they are attractive potential **carriers** of (pro)-**drugs** to these cell types.

L13 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:262521 HCAPLUS

DOCUMENT NUMBER: 116:262521

TITLE: Method for preparing a lipoprotein modified by the incorporation of a lipophilic active substance  
INVENTOR(S): Favre, Gilles; Duriez, Patrick; Monard, Francoise; Medhi, Samadi Baboli; Soula, Georges; Fruchart, Jean Charles

PATENT ASSIGNEE(S): Universite Droit et Sante Lille II, Fr.; Universite Paul Sabatier (Toulouse III)

SOURCE: PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9200761	A1	19920123	WO 1991-FR573	19910712 <--
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
FR 2664500	A1	19920117	FR 1990-8980	19900713 <--
FR 2664500	B1	19941028		
CA 2066416	AA	19920114	CA 1991-2066416	19910712 <--
AU 9182157	A1	19920204	AU 1991-82157	19910712 <--
AU 654144	B2	19941027		
EP 491921	A1	19920701	EP 1991-913037	19910712 <--
EP 491921	B1	19960207		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 06500768	T2	19940127	JP 1991-512790	19910712 <--
JP 07086089	B4	19950920		
AT 133867	E	19960215	AT 1991-913037	19910712 <--
US 5324821	A	19940628	US 1992-838444	19920506 <--
PRIORITY APPLN. INFO.:			FR 1990-8980	A 19900713 <--
			WO 1991-FR573	A 19910712 <--

AB A method is provided for preparation of a lipoprotein modified by the incorporation of  $\geq 1$  lipophilic substance (other than a triglyceride), e.g. a **drug**. The active substance is incorporated into an emulsion of a lipid phase in an aqueous continuous phase, an initial lipoprotein and  $\geq 1$  lipid transfer protein are added to the emulsion, the mixture is incubated, and the active substance-containing lipoprotein is isolated. The modified lipoproteins may be used in pharmaceutical or cosmetic compns. Mitoxantrone dilynolenate was incorporated into low-d. lipoprotein (LDL) using a com. lipid emulsion (Endolipid); lipoprotein-deficient serum was used as a source of transfer proteins. The modified LDL bound to apolipoprotein-B and -E receptors of HeLa cells as well as did native LDL. The decrease in plasma concentration of the modified LDL was close to that for native LDL. A modified

**LDL** containing elliptinium oleate was more cytotoxic to L1210 cells than was elliptinium oleate added alone at the same concentration. Formulations of modified LDLs are included.

=> d que stat l15

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L1      29816 SEA FILE=HCAPLUS ABB=ON  ?APOLIPOPROTEIN? OR ?APOE?
L2      1399 SEA FILE=HCAPLUS ABB=ON  L1 AND (?DRUG?(W)?DELIVER? OR
      ?CARRIER?)
L3      197 SEA FILE=HCAPLUS ABB=ON  L2 AND (?PHOSPHATIDYLCHOLIN? OR
      ?PHOSPHOLIPID?)
L5      1 SEA FILE=REGISTRY ABB=ON  CHOLESTEROL/CN
L6      143 SEA FILE=HCAPLUS ABB=ON  L3 AND (L5 OR ?CHOLESTEROL?)
L7      77 SEA FILE=HCAPLUS ABB=ON  L6 AND (?DRUG? OR ?PHARM? OR ?ANTIBIOT
      IC? OR ?THERAP?)
L9      76 SEA FILE=HCAPLUS ABB=ON  L7 AND ?ESTER?
L10     25 SEA FILE=HCAPLUS ABB=ON  L9 AND LDL
L11     76 SEA FILE=HCAPLUS ABB=ON  L9 OR L10
L12     67 SEA FILE=HCAPLUS ABB=ON  L11 AND (PRD<20021203 OR PD<20021203)
L13     23 SEA FILE=HCAPLUS ABB=ON  L12 AND LDL
L14     9 SEA L13
L15     9 DUP REMOV L14 (0 DUPLICATES REMOVED)

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=> d ibib abs l15 1-9

L15 ANSWER 1 OF 9 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.  
on STN

ACCESSION NUMBER: 2000280546 EMBASE

TITLE: Quantification of human plasma **phospholipid** transfer protein (PLTP): Relationship between PLTP mass and **phospholipid** transfer activity.

AUTHOR: Huuskonen J.; Ekstrom M.; Tahvanainen E.; Vainio A.; Metso J.; Pussinen P.; Ehnholm C.; Olkkonen V.M.; Jauhiainen M.

CORPORATE SOURCE: M. Jauhiainen, Department of Biochemistry, National Public Health Institute, Mannerheimintie 166, FIN-00300 Helsinki, Finland. matti.jauhiainen@ktl.fi

SOURCE: Atherosclerosis, (2000) 151/2 (451-461).

Refs: 44

ISSN: 0021-9150 CODEN: ATHSBL

PUBLISHER IDENT.: S 0021-9150(99)00429-3

COUNTRY: Ireland

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 017 Public Health, Social Medicine and Epidemiology  
018 Cardiovascular Diseases and Cardiovascular Surgery  
029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

AB A sensitive sandwich-type enzyme-linked immunosorbent assay (ELISA) for human plasma **phospholipid** transfer protein (PLTP) has been developed using a monoclonal capture antibody and a polyclonal detection antibody. The ELISA allows for the accurate quantification of PLTP in the range of 25-250 ng PLTP/assay. Using the ELISA, the mean plasma PLTP concentration in a Finnish population sample (n = 159) was determined to be  $15.6 \pm 5.1$  mg/l, the values ranging from 2.30 to 33.4 mg/l. PLTP mass correlated positively with HDL- **cholesterol** ( $r = 0.36$ ,  $P < 0.001$ ), apoA-I ( $r = 0.37$ ,  $P < 0.001$ ), apoA-II ( $r = 0.20$ ,  $P < 0.05$ ), Lp(A-I) ( $r = 0.26$ ,  $P = 0.001$ ) and Lp(A-I/A-II) particles ( $r = 0.34$ ,  $P < 0.001$ ), and negatively with body mass index (BMI) ( $r = -0.28$ ,  $P < 0.001$ ) and serum triacylglycerol (TG) concentration ( $r = -0.34$ ,  $P < 0.001$ ). PLTP mass did not correlate with **phospholipid** transfer activity as measured with a radiometric assay. The specific activity of PLTP, i.e. **phospholipid** transfer activity divided by PLTP mass, correlated positively with plasma TG concentration ( $r = 0.568$ ,  $P < 0.001$ ), BMI ( $r = 0.45$ ,  $P < 0.001$ ), apoB ( $r = 0.45$ ,  $P < 0.001$ ), total **cholesterol** ( $r = 0.42$ ,  $P < 0.001$ ), LDL-**cholesterol** ( $r = 0.34$ ,  $P <$

0.001) and age ( $r = 0.36$ ,  $P < 0.001$ ), and negatively with HDL-cholesterol ( $r = -0.33$ ,  $P < 0.001$ ), Lp(A-I) ( $r = -0.21$ ,  $P < 0.01$ ) as well as Lp(A-I/A-II) particles ( $r = -0.32$ ,  $P < 0.001$ ). When both PLTP mass and phospholipid transfer activity were adjusted for plasma TG concentration, a significant positive correlation was revealed (partial correlation,  $r = 0.31$ ,  $P < 0.001$ ). The results suggest that PLTP mass and phospholipid transfer activity are strongly modulated by plasma lipoprotein composition: PLTP mass correlates positively with parameters reflecting plasma high density lipoprotein (HDL) levels, but the protein appears to be most active in subjects displaying high TG concentration.

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L15 ANSWER 2 OF 9 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.  
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ACCESSION NUMBER: 1999357470 EMBASE

TITLE: Antiproliferative efficacy of lipophilic soy isoflavone phytoestrogens delivered by low density lipoprotein particles into cultured U937 cells.

AUTHOR: Meng Q.-H.; Wahala K.; Adlercreutz H.; Tikkanen M.J.

CORPORATE SOURCE: Prof. M.J. Tikkanen, Department of Medicine, Helsinki Univ. Central Hospital, Haartmaninkatu 4, 00290 Helsinki, Finland. matti.j.tikkanen@helsinki.fi

SOURCE: Life Sciences, (10 Sep 1999) 65/16 (1695-1705).

Refs: 39

ISSN: 0024-3205 CODEN: LIFSAK

PUBLISHER IDENT.: S 0024-3205(99)00418-X

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

030 Pharmacology

037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Some fat-soluble bioactive substances incorporated into low density lipoprotein (LDL) may be delivered into cells via LDL receptor pathway influencing cellular functions. In this study, we synthesized a number of fat-soluble isoflavone esters and investigated their incorporation into LDL as well as their delivery into U937 cells. Using an artificial transfer system (Celite dispersion), genistein and daidzein oleates and daidzein dilinoleate were efficiently incorporated into LDL with concentrations ranging between 2.7 to 16.9 isoflavone molecules/LDL particle, while much smaller amounts of unesterified isoflavones and genistein stearates were transferred into LDL. LDL containing 7-oleates or 4',7-dioleates of genistein and daidzein significantly reduced U937 cell proliferation by 36-43%. The strongest inhibitory effect was shown by daidzein 4',7-dilinoleate with 93% reduction of cell proliferation. Neither of the 4'-oleates of genistein and daidzein contained in LDLs exhibited antiproliferative effects although they were incorporated into LDL. In summary, we demonstrated that isoflavones made fat-soluble by esterification can be incorporated into LDL in vitro and delivered into cultured U937 cells via the LDL-receptor pathway, reducing the cell proliferation.

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ACCESSION NUMBER: 1999342937 EMBASE

TITLE: Distribution of PCB congeners, DDE, hexachlorobenzene, and methylsulfonyl metabolites of PCB and DDE among various

fractions of human blood plasma.  
AUTHOR: Noren K.; Weistrand C.; Karpe F.  
CORPORATE SOURCE: K. Noren, Dept. of Med. Biochem./Biophysics, Karolinska  
Institutet, S-171 77 Stockholm, Sweden  
SOURCE: Archives of Environmental Contamination and Toxicology, (1999) 37/3 (408-414).  
Refs: 38  
ISSN: 0090-4341 CODEN: AECTCV  
COUNTRY: United States  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 046 Environmental Health and Pollution Control  
052 Toxicology  
LANGUAGE: English  
SUMMARY LANGUAGE: English

AB The concentrations of chlorinated biphenyls (CBs), 1,1-bis(4-chlorophenyl)-2,2-dichloroethene (DDE), hexachlorobenzene (HCB), and the methylsulfonyl metabolites of CBs (MeSO<sub>2</sub>-CBs) and DDE (MeSO<sub>2</sub>-DDE) were determined in human plasma samples and in the fractions obtained by ultracentrifugation of plasma into very-low-density (VLDL), low-density (LDL), high-density (HDL) lipoprotein and lipoprotein depleted (LPDP) fractions (containing primarily albumin). The concentrations of triacylglycerols, **cholesterol**, **phospholipids**, and **apolipoprotein B** (apoB) were determined. The organochlorine compounds were associated with all fractions, but predominantly with the LPDP fraction. On an average 44% of CBs, 61% of MeSO<sub>2</sub>-CBs, 73% of DDE, 77% of MeSO<sub>2</sub>-DDE, and 45% of HCB were distributed in the LPDP fraction. A tendency to greater association of 3- methylsulfonyl substituted than of corresponding 4-methylsulfonyl substituted chlorobiphenyls to the LPDP fraction was noticed. Among the lipoprotein fractions, **LDL** was the main **carrier** of HCB, DDE and CBs. MeSO<sub>2</sub>-DDE was predominantly found in HDL and MeSO<sub>2</sub>CBs were distributed equally among the **LDL** and HDL fractions. Calculating the concentrations of organochlorine compounds in relation to the content of apoB, the levels were about 10 times higher in VLDL than in **LDL**.

L15 ANSWER 4 OF 9 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN  
ACCESSION NUMBER: 1996:526440 BIOSIS  
DOCUMENT NUMBER: PREV199699248796  
TITLE: Selective inhibition of free **apolipoprotein**  
-mediated cellular lipid efflux by probucol.  
AUTHOR(S): Tsujita, Maki; Yokoyama, Shinji [Reprint author]  
CORPORATE SOURCE: Biochem. 1, Nagoya City Univ. Med. Sch., Kawasumi 1,  
Mizuho-ku, Nagoya 467, Japan  
SOURCE: Biochemistry, (1996) Vol. 35, No. 40, pp.  
13011-13020.  
CODEN: BICHAW. ISSN: 0006-2960.  
DOCUMENT TYPE: Article  
LANGUAGE: English  
ENTRY DATE: Entered STN: 22 Nov 1996  
Last Updated on STN: 23 Nov 1996

AB We attempted to demonstrate selective modulation of lipid-free **apolipoprotein**-mediated cellular lipid efflux in order to test the hypothesis that it is an event independent of nonspecific physicochemical **cholesterol** exchange. Probucol, a unique **cholesterol**-lowering **drug**, was found to selectively suppress this pathway in vitro in mouse peritoneal macrophage. Probucol was given to the cells via the uptake of acetylated low-density lipoprotein (**LDL**) into which it had been incorporated. The uptake of lipoprotein-**cholesteryl ester** by the macrophage was the same whether the acetylated **LDL** was probucol-carrying or probucol-free, and

probucol accumulated in the cell in parallel to **cholesterol** when carried by the lipoprotein. Incorporation of (35S)methionine into cell protein was unaffected by probucol accumulated in the cells. The efflux of cellular **cholesterol** and **phospholipid** mediated by lipid-free human **apolipoproteins** (apo) A-I, A-II, and E was all completely inhibited by probucol. Reversible binding of free apoA-I to the cellular surface was also completely blocked by probucol in this condition. On the other hand, nonspecific **cholesterol** exchange between **LDL** and macrophage was unaffected by probucol. Thus, probucol selectively inhibited **apolipoprotein**-mediated cellular lipid efflux by blocking specific binding of free **apolipoprotein** to the cell without influencing nonspecific lipid exchange. In the absence of lecithin: **cholesterol** acyltransferase (LCAT) reaction, apparent cellular **cholesterol** efflux to high-density lipoprotein (HDL) was reduced by probucol by 40-70% while the rate of **cholesterol** influx from HDL to the cells was unaffected, resulting in cancellation of the net cellular **cholesterol** efflux to HDL. However, the increase of the net **cholesterol** efflux to HDL by LCAT was unaffected by probucol. Net cellular **cholesterol** efflux to HDL in the absence of LCAT, therefore, seems to depend on an **apolipoprotein**-mediated mechanism.

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ACCESSION NUMBER: 95049938 EMBASE

DOCUMENT NUMBER: 1995049938

TITLE: Characterization of native and **drug**-loaded human low density lipoproteins.

AUTHOR: Westesen K.; Gerke A.; Koch M.H.J.

CORPORATE SOURCE: IPT der TU Braunschweig, Mendelssohnstr. 1, D-38106 Braunschweig, Germany

SOURCE: Journal of Pharmaceutical Sciences, (1995) 84/2 (139-147).

ISSN: 0022-3549 CODEN: JPMSAE

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 016 Cancer  
030 Pharmacology  
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Low-density lipoproteins (LDLs), the physiological vehicles for lipids, are potentially useful **drug delivery** devices for (hydrophobic) **drugs**. The physicochemical characteristics of **LDL** loaded with the adriamycin derivative AD 32 or the N-mustard derivative WB 4291 were compared to that of native and reconstituted **LDL** at different temperatures. X-ray solution scattering indicates that loading with AD 32 has no detectable effect on the particle structure at room temperature, in contrast to WB 4291. According to 19F NMR data, AD 32 molecules are located in two distinct chemical environments with restricted motional freedom of the CF3 groups in samples stored as lyophilisates. 1H NMR signals from AD 32 were not observed, while those from WB 4291 could be distinguished from those of **LDL** constituents. WB 4291 molecules are in an environment with a higher motional freedom than AD 32 molecules. 1H NMR data suggest a higher fluidity of the core components for the WB-loaded LDLs compared to the other **LDL** preparations. While the motional freedom of the **phospholipid** head groups seems to be temperature independent, there is an increase in the mobility of the lipid components in the core region of the **LDL** particles with temperature.



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on STN

ACCESSION NUMBER: 95146639 EMBASE  
DOCUMENT NUMBER: 1995146639  
TITLE: Interaction of synthetic discoidal HDL containing an amphipathic peptide and **phosphatidylcholine** with human macrophages.  
AUTHOR: Vuaridel E.S.; Simon S.R.  
CORPORATE SOURCE: Pharmapeptides Campus Universitaire, Parc d'Affaires International, F-74166 Archamps, France  
SOURCE: European Journal of Pharmaceutics and Biopharmaceutics, (1995) 41/2 (94-100).  
ISSN: 0939-6411 CODEN: EJPBEL  
COUNTRY: Germany  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 037 Drug Literature Index  
LANGUAGE: English  
SUMMARY LANGUAGE: English

AB We have reconstituted an 18 residue peptide (18A) analogue of **apolipoprotein-AI** described by Anantharamaiah (1) with egg lecithin to prepare a model of nascent discoidal HDL. Particles were prepared by a sodium cholate dialysis protocol as described by Matz and Jonas (2) and labelled with I125 or the fluorescent probe 1,1'-dioctadecyl-3,3',3'-tetramethylindocarbocyanine. The interaction of these 18A-complexes with human monocyte-derived macrophages was investigated in vitro. Total binding (4°C) and uptake (37°C) were time- and ligand concentration-dependent. Association of reconstituted complexes with macrophages reached a steady state at 2 h with  $K_d = 4.5-5.6 \times 10^{-6}$  M at 4°C and  $K_d = 2.4-8.3 \times 10^{-6}$  M at 37°C as determined either by fluorescence or I135 labelling. Specific association at 37°C reached saturation at a concentration of 30 ng 18A/5 x 105 cells and  $K_d = 1.9 \times 10^{-6}$  M as determined by fluorescence labelling. **Apolipoprotein-AI**-liposomes effectively competed with the 18A-complexes. A 20-fold excess of HDL, LDL and to some extent Ac-LDL reduced the association at subsaturating concentrations of 18A-complexes with macrophages (37°C), according to their **apolipoprotein-AI** content. The values for complex- and liposome-mediated **cholesterol** efflux from macrophages suggest an increased **cholesterol** transport when 18A or **apolipoprotein-AI** were associated with **phospholipids** as **carrier** particles. Confocal light microscopy revealed the accumulation of 18A-complexes in subsurface regions of macrophages, leaving internal regions less occupied.

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on STN

ACCESSION NUMBER: 93241447 EMBASE  
DOCUMENT NUMBER: 1993241447  
TITLE: - Metabolic behavior in rats of a nonprotein microemulsion resembling low- density lipoprotein.  
AUTHOR: Maranhao R.C.; Cesar T.B.; Pedroso-Mariani S.R.; Hirata M.H.; Mesquita C.H.  
CORPORATE SOURCE: Faculdade de Ciencias Farmaceuticas, USP, Av. Dr. Lineu Prestes 580, Sao Paulo, SP 05508-900, Brazil  
SOURCE: Lipids, (1993) 28/8 (691-696).  
ISSN: 0024-4201 CODEN: LPDSAP  
COUNTRY: United States  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 029 Clinical Biochemistry

037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

AB A protein-free microemulsion (LDE) with a lipid composition resembling that of low-density lipoprotein (LDL) was used in metabolic studies in rats to compare LDE with the native lipoprotein. LDE labeled with radioactive lipids was injected into the bloodstream of male Wistar rats, and plasma kinetics of the labeled lipids were followed on plasma samples collected at regular intervals for 12 h after injection. The 24-h LDE uptake by different tissues was also measured in tissue samples excised after the animals had been sacrificed. We found that LDE plasma kinetics were similar to those described for native LDL [fractional clearance rate (FCR) of **cholesteryl ester**,  $0.42 \pm 0.11$  h<sup>-1</sup>]. The major site for LDE uptake was the liver, and the tissue distribution of the LDE injected radioactivity was as one would expect for **LDL**. To test whether LDE was taken up by the specific **LDL** receptors, the LDE emulsion was injected into rats treated with 17 $\alpha$ -ethinylestradiol, which is known to increase the activity of these receptors; as expected, removal of LDE from the bloodstream increased (FCR =  $0.90 \pm 0.35$  h<sup>-1</sup>). On the other hand, saturation of the receptors that remove remnants by prior infusion of massive amounts of lymph chylomicrons did not change LDE plasma kinetics. These results indicate that LDE is cleared from plasma by B,E receptors and not by the E receptors that remove remnants. Incorporation of free **cholesterol** into LDE increased LDE plasma clearance. Incubation studies also showed that LDE incorporates a variety of **apolipoproteins**, including apo E, a ligand for recognition of lipoproteins by specific receptors. Our data suggest that LDE can be a useful tool to test **LDL** metabolism and B,E receptor function.

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ACCESSION NUMBER: 93161341 EMBASE

DOCUMENT NUMBER: 1993161341

TITLE: **Drug** targeting: Application of endogenous **carriers** for site-specific delivery of **drugs**.

AUTHOR: Van Berkel Th. J.C.

CORPORATE SOURCE: Division of Biopharmaceutics, Center for Bio-Pharmaceutical Sci., Sylvius Lab., University of Leiden, Leiden, Netherlands

SOURCE: Journal of Controlled Release, (1993) 24/1-3 (145-155).

ISSN: 0168-3659 CODEN: JCREEC

COUNTRY: Netherlands

DOCUMENT TYPE: Journal; Conference Article

FILE SEGMENT: 004 Microbiology  
016 Cancer  
023 Nuclear Medicine  
027 Biophysics, Bioengineering and Medical Instrumentation  
048 Gastroenterology  
030 Pharmacology  
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Lipoproteins are endogenous particulate **carriers** responsible for the transport of **cholesterol** and other lipids in the blood circulation. Structurally, they consist of an apolar core, composed of triglycerides and/or **cholesteryl esters**, surrounded by

a monolayer of **phospholipids** in which **cholesterol** and **apolipoproteins** are embedded. Being endogenous **carriers**, lipoproteins are not immunogenic and escape recognition by the reticulo-endothelial system. Four main lipoprotein classes with characteristic sizes, densities, lipids and apoproteins can be distinguished: chylomicrons, very low density lipoprotein (VLDL), low density lipoprotein (**LDL**) and high density lipoprotein (HDL). Lipoproteins are cleared from the circulation by specific lipoprotein receptors, which recognize the **apolipoproteins**. Chylomicron remnants and a particular type of VLDL,  $\beta$ -VLDL, are rapidly taken up by remnant receptors present on parenchymal liver cells. **LDL** is cleared mainly via specific **LDL** receptors in the liver. In addition, some types of tumor cells show a very high rate of **LDL** uptake. Lipoproteins can also be directed to non-lipoprotein receptors by chemical modification of the **apolipoproteins**. Acetylation of **LDL** induces rapid uptake by scavenger receptors on endothelial liver cells. Lactosylation of **LDL** and HDL induced rapid, galactose-specific uptake by Kupffer and parenchymal liver cells, respectively. The oily core of lipoproteins provides an ideal domain for lipophilic **drugs**. Some lipophilic compounds incorporate spontaneously into lipoproteins. More hydrophilic **drugs**, however, have to be provided with lipophilic anchors to enable incorporation (**prodrugs**). These (pro)-**drugs** can be incorporated into lipoproteins by aqueous addition, contact methods or reconstitution methods. Because (modified) lipoproteins can be taken up by specific receptors on tumor cells or liver cells they are attractive potential **carriers** of (pro)-**drugs** to these cell types.

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